

REMARKS

Claims 1-25 are pending in the application. By this Amendment, claims 1, 3 and 22 have been amended, and new claims 23-25 added. Claims 10-22 have been withdrawn from consideration. Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Restriction Requirement

Claim 22 is directed to an apparatus comprising "means" for performing the features of the method recited in claim 1. Claim 22 is a "linking claim," which links the claimed method to the claimed apparatus. As set forth in MPEP § 809, "linking claims **must** be examined with, and thus are considered part of, the invention elected," and "[w]hen all claims directed to the elected invention are allowable, should any linking claim be allowable, the restriction requirement between the linked inventions must be withdrawn."

However, the Office did not examine claim 22, but grouped it with non-elected claims 10-21 in the restriction requirement. Applicants respectfully request that claim 22 also be examined. Once claim 22 is found to be allowable, the restriction requirement with respect to claims 10-21 should be withdrawn.

Rejection Under 35 U.S.C. § 112, ¶2

Claims 1-9 were rejected under 35 U.S.C. § 112, second paragraph.

To clarify the meaning of "its lower end" in claim 1, this claim has been amended to recite, *inter alia*, "a lower end of the dip tube."

Claim 1 has been further amended to recite "the lower end position of the carriage being defined, for dipping at least one subsequent dip tube into the molten glass, by means of an adjustment device and/or a control device, based on a previously-made assessment that the gob is suitable for processing when the carriage is displaced to the lower end position" (emphasis added). Support for this language can be found, for example, at paragraphs [0067] to [0069] of the specification.

Applicants submit that claims 1-9 are in compliance with the requirements of 35 U.S.C. § 112, ¶2. Therefore, withdrawal of this rejection is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 1-4, 7 and 8 were rejected under 35 U.S.C. § 102(b) over DE 101 16 075. The rejection is respectfully traversed.

In the Office Action, the Examiner used U.S. Patent Application Publication No. 2003/0056539 to Auras et al. ("Auras") as an English-language equivalent to DE 101 16 075. Applicants will also direct their following remarks to Auras.

Claim 1, as amended, recites a method for producing a glass body provided with a glass membrane for a chemical sensor. The method comprises inserting a dip tube into a mount joined to a displaceably supported carriage so that a lower end of the dip tube is reproducibly positioned with respect to a reference position; displacing the carriage as far as a lower end position (P1); and dipping the dip tube into a mass of molten glass as the carriage is displaced downward and upon retraction of the carriage pulling the dip tube out of the molten glass to withdraw a gob that can be shaped into a desired shape by supply of a gaseous medium, the lower end position

of the carriage being defined, for dipping at least one subsequent dip tube into the molten glass, by means of an adjustment device and/or a control device based on a previously-made assessment that the gob is suitable for processing when the carriage is displaced to the lower end position (emphasis added).

As recited in claim 1, the method comprises displacing the carriage as far as a lower end position (P1), dipping the dip tube into a mass of molten glass as the carriage is displaced downward and upon retraction of the carriage pulling the dip tube out of the molten glass to withdraw a gob. As further recited in claim 1, the lower end position of the carriage is defined, for dipping at least one subsequent dip tube into the molten glass, by means of an adjustment device and/or a control device, based on a previously-made assessment that the gob is suitable for processing when the carriage is displaced to the lower end position.

The inventors determined that it is desirable that respective dip tubes be inserted into the mount in a reproducible manner, i.e., so that a lower end of each dip tube is reproducibly positioned with respect to a reference position. See paragraph [00022] of the specification. In other words, it is desirable for the position of a respective dip tube's lower end, which later dips into the molten glass, to be the same as the position for other dip tube's lower ends, when the other dip tubes are respectively inserted into the mount. This reproducible insertion of the dip tubes can be achieved by positioning the lower end of each dip tube with respect to a reference position using reference means. The reference means can be, for example, a reference element (see paragraphs [00029] and [00055] of the specification), or a camera (see paragraphs [00078] and [00080] of the specification).

Auras fails to disclose every feature recited in claim 1. Auras discloses a method for manufacturing a blown glass body, which comprises the replicable positioning of an immersion tube by measuring (detecting) the position or level of the liquid surface 42 of molten glass 8 contained in a pot 6 using certain means 40. See Auras at paragraph [0037]. In fact, Auras discloses that "it is essential that the means 40 precisely determine the position of the liquid surface 42 relative to a coordinate system of the holding device 14 or of the adjusting means" (Emphasis added). As such, Auras' liquid surface position measurement must be done very carefully in order to avoid errors due to the measuring method. Auras' method comprises measuring the position or level of the molten glass in the pot to ensure that each dip tube is dipped into the vitreous mass by a predefined immersion depth.

The method recited in claim 1 does not include such liquid surface position measurement steps as required by Auras. For example, see paragraph [00024] of the specification, where it is explained that "[t]he level of the molten glass is therefore not measured with the present apparatus" In contrast, in the claimed method, the position of the lower end of each dip tube can be reproducibly the same, and an optimum withdrawal of a glass gob can be achieved by dipping a first tube into the molten glass by assessment of the gob and/or the finished membrane paragraph. See paragraphs [00024] and [00069] of the specification. When an optimum withdrawal is found, a spacing adjuster can be calibrated and incrementally readjusted (see, e.g., claim 2) according to the known amount of glass gob to be withdrawn from the molten glass. See paragraphs [00023], [00025], [00067] and [00071] of the specification.

Accordingly, because Auras does not disclose every feature recited in claim 1, claim 1, and also dependent claims 2-4, 7 and 8, are not anticipated by Auras. For the foregoing reasons, withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103

A. Claim 6 was rejected under 35 U.S.C. § 103(a) over DE 101 16 075. The rejection is respectfully traversed.

Claim 6 depends from claim 1. Applicants respectfully submit that Auras also fails to suggest any reason to one skilled in the art to modify its disclosed method, in which it is essential to precisely determine the position of the liquid surface relative to a coordinate system of the holding device or of the adjusting means, to result in the method recited in claim 1. Accordingly, Auras would not have rendered obvious the method of claim 6 for at least the same reasons as those stated in regard to claim 1.

Furthermore, the method recited in claim 1 can provide advantages as compared to Auras' method. Particularly, as explained at paragraph [0026] of the specification:

Measurement errors, which can possibly be caused by external factors, and resultant changes in the quality of the finished glass bodies can be therefore avoided. Moreover, the cost for procurement and calibration of the measurement instruments can be averted.

The claimed method also allows for dipping more than once into the molten glass with one single dip tube. In some embodiments, multiple dipping can be performed when the gob is assessed to be too small. These advantages further support the unobviousness of the claimed method.

Therefore, withdrawal of this rejection is respectfully requested.

B. Claims 5 and 9 were rejected under 35 U.S.C. § 103(a) over DE 101 16 075 in view of U.S. Patent No. 2,247,424 to Williams ("Williams"). The rejection is respectfully traversed.

Claims 5 and 9 depend from claim 1. The Office acknowledges that Auras fails to suggest the features of claims 5 and 9, but asserts that Williams cures the deficiencies of Auras. Applicants respectfully disagree.

Williams discloses a glass gathering device. However, Williams also would not have provided a reason to one skilled in the art to modify Auras' method, which requires precisely determining the position of the liquid surface relative to a coordinate system of the holding device or of the adjusting means, in a manner to produce the method recited in claim 1. Accordingly, the combination of Auras and Williams does not support the rejection of claims 5 and 9 for at least the same reasons as those stated in regard to claim 1. Therefore, withdrawal of this rejection is respectfully requested.

New Claims

New claims 23-25 depend from claim 1. Support for the features recited in these claims can be found in claim 3. Regarding claims 24 and 25, in the claimed method, a camera can be used for positioning the dip tube (see paragraph [00080]) and finding an optimum shape of the glass membrane (see paragraph [0079]). Auras, for example, only discloses finding a desired body geometry of the glass body. See Auras at paragraph [0026].

Conclusion

The application is believed to be in condition for allowance. Should the Examiner have any questions regarding this application, the Examiner is respectfully requested to contact the undersigned at the telephone number below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: July 5, 2007

By: 

Edward A. Brown
Registration No. 35,033

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620